

Claims

I claim:

1. A filter assembly comprising:
a non-metal housing having an open end,
5 a flange having a first end and a second end, said flange first end being embedded within a wall of said housing adjacent to said housing open end, said flange second end extending from said housing open end, and
a cover plate connected to said second end of said flange.
- 10 2. The assembly described in claim 1, further comprising a compressible seal disposed adjacent said housing open end and said flange.
3. The assembly described in claim 2, wherein said compressible seal is integrally formed with and comprised of the same material as said housing.
- 15 4. The assembly described in claim 3, further comprising a structural plate disposed adjacent said flange, and
said structural plate being disposed between said compressible seal and said cover plate.
- 20 5. The assembly as described in claim 4, wherein a fluid-tight seal is ensured by a secure connection between said cover plate and said second end of said flange, such that said compressible seal is placed in compression, and said flange is placed in tension.

6. The assembly as described in claim 5, wherein said secure connection between said cover plate and said second end of said flange is a double seamed connection.

7. The assembly as described in claim 6, wherein said non-metal housing is
5 comprised of transparent plastic having a substantially cylindrical shape.

8. The assembly as described in claim 7 wherein said flange is embedded in the wall of said non-metal cylindrical housing during an injection molding process that forms said non-metal cylindrical housing.

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9. The assembly as described in claim 8, wherein said structural plate, and said cover plate are comprised of metal.

10. The assembly as described in claim 9, wherein said flange is comprised of a
15 malleable cylindrical metal ring.

11. The assembly as described in claim 10, wherein said structural plate, said cover plate, and said flange are comprised of steel.

20 12. The assembly as described in claim 11, wherein said flange extends from said housing around a peripheral edge of said compressible seal and said structural plate, and forms a double-seamed connection with said cover plate.

13. A filter assembly comprising:
- a non-metal cylindrical housing having a closed and an open end;
- a flange having a first and second end, said flange first end being permanently and non-detachably embedded within a wall of said housing adjacent said housing open end;
- 5 a compressible seal disposed adjacent said flange; and
- a cover plate connected to said flange.
14. The filter assembly described in claim 13, further comprising a structural plate disposed within said compressible seal and between said cover plate and said open end of said housing, wherein said compressible seal engages said open end of said housing to provide a sealed connection between said open end of said housing and said cover plate.
15. The assembly as described in claim 13, wherein said structural plate is disposed between the compressible seal and the cover plate.
16. The assembly as described in claim 13, further comprising an elastomeric gasket disposed adjacent said cover plate,
- 20 said cover plate being disposed directly adjacent to said structural plate and said metal flange.
17. The assembly as described in claim 13, wherein a fluid-tight seal is ensured by a

secure connection between said cover plate and said flange second end, such that said compressible seal is placed in compression, and said flange is placed in tension.

18. The assembly as described in claim 17, wherein said secure connection between
5 said cover plate and said flange second end is a double seamed connection.

19. The assembly as described in claim 13, wherein said non-metal cylindrical housing is comprised of transparent plastic.

10 20. The assembly as described in claim 13, wherein said flange is embedded in the wall of said non-metal cylindrical housing during an injection molding process.

21. The assembly as described in claim 13, wherein said flange is comprised of a
15 malleable cylindrical metal ring.

22. The assembly as described in claim 14, wherein said structural plate, said cover plate, and said flange are comprised of steel.

20 23. The assembly as described in claim 13, wherein said flange extends from said housing around the peripheral edge of said compressible seal and said structural plate, and forms a double-seamed connection with said cover plate.

24. The assembly as described in claim 13, wherein said flange second end is crimped to said cover plate to compress said compressible seal.
25. The assembly as described in claim 13, wherein said embedded portion of said
5 flange first end has an L shape,
said flange emerging from said housing perpendicular to said housing cylindrical wall.
26. A liquid filter apparatus comprising:
10 a transparent plastic cylindrical housing having a closed and an open end,
a metal flange member having a first end permanently and non-detachably
embedded within a wall of said housing adjacent said housing open end,
a compressible seal integrally formed with said housing open end,
said compressible seal disposed directly adjacent to said housing, said flange, and
15 a structural plate,
a metal cover plate disposed directly adjacent to said structural plate, said flange,
and a rubber gasket,
said cover plate forming a double seamed connection with said metal flange.
- 20 27. The assembly described in claim 1, further comprising a structural plate positioned within said flange and disposed between said cover plate and said open end of said housing and held in place thereby.